

What is claimed is:

1. In a duplicate address translating system which uses private addresses based on a specific protocol in respective private networks and also connects a plurality of private networks, which permit duplicate assignment of private addresses between respective private networks, with a global network which uses a global address based on said specific protocol, the improvement comprises:

an address translating means for performing, in said plurality of private networks, for communications data having identification information for identifying the respective private networks, mutual translation between said plurality of private addresses and said global address with a combination of said identification information and said private addresses.

2. A duplicate private address translating system as set forth in claim 1, wherein

said address translating means comprises;

a switching hub which performs, for communications data having VLAN-IDs for identifying virtual LAN groups that are realized inside said plurality of private address networks, switching based on said VLAN-IDs and

a duplicate network address translating device which performs, for frames which are to be switched by said switching hub and have private addresses and VLAN-IDs, mutual translation between said private addresses and said global address with a combination of said VLAN-IDs and

said private addresses.

3. A duplicate private address translating system as set forth in claim 1, wherein

said address translating means is an MPLS router-cum-network address translating device which performs, for frames having MPLS labels for identifying the plurality of private networks, routing of an MPLS network based on said MPLS labels and also performs, for frames having said MPLS labels and private addresses, mutual translation between said private addresses and said global address with a combination of said MPLS labels and said private addresses.

4. A duplicate private address translating system as set forth in claim 1, wherein

said address translating means comprises;

an MPLS edge router which performs, for frames having MPLS labels for identifying the plurality of private networks, routing of an MPLS network based on said MPLS labels and also translates said MPLS labels into VLAN-IDs for identifying virtual LAN groups that are realized inside said plurality of private networks and

a duplicate address translating device which performs, for frames having VLAN-IDs and private addresses that are translated by said MPLS edge router, mutual translation between said private addresses and said global address with a combination of said VLAN-IDs and said private addresses.

5. A duplicate address network system wherein apparatuses

use addresses based on a specific protocol in respective networks and which also comprises a plurality of networks which permit duplicate assignment of addresses between respective networks and a duplicate addresses-handling server which is connected to said plurality of networks via a switching means which performs switching based on identification information of said respective networks, wherein

said duplicate addresses-handling server comprises:

a routing table showing the relationship between virtual interfaces which correspond to identification information and network addresses;

a server portion in which the identification information has been related to the virtual interfaces beforehand and which stores, if receiving an arbitrary request from an apparatus in any of the networks, said request and identification information attached to said request, and makes, if making a response to said request, reference to said routing table, selects a virtual interface which has been related to the identification information and with which a network address of a response receiver coincides, and makes a response to said virtual interface, and

a plurality of virtual interfaces for receiving data of said server portion, and further comprises:

a virtual interface processing portion which adds, if receiving response data from any virtual interface,

received identification information which has been related to said virtual interface in a routing table and sends said data to said switching means.

6. A duplicate address network system wherein apparatuses use addresses based on a specific protocol in respective networks and which also comprises; a plurality of networks which permit duplicate assignment of addresses between respective networks and a duplicate addresses-handling server which is connected to said plurality of networks via a switching means which performs switching based on identification information of said respective networks, wherein

said duplicate address server comprises:

a duplicate address translating portion which performs, if sending and receiving data to and from the switching means, mutual translation between a combination of said identification information of said data and said addresses and a combination of a specific address and different respective ports and

a server portion which accepts a request at said specific address and different respective ports via said duplicate address translating portion and sends response data to said request with said specific address and said applicable port toward said duplicate address translating portion.